



**metrc**<sup>TM</sup>  
A **Eranwell** Business

# Welcome to Metrc

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# Agenda

- Introduction
- Who is Franwell
- What is Metrc
- How does Metrc work
- Security and information
- Why RFID
  - How does it work
- Integration with other software
- Training and support

[www.metrc.com/Michigan](http://www.metrc.com/Michigan)



# Who is Franwell

- 25+ years of business experience in (high flow & volume) supply chain processes & tracking
- 30+ years of experience in computer technologies
- 15+ years focused on auto identification technology (Bar-coding, RFID, etc.)
- In-house
  - Low and high level software design & engineering
  - Digital/hardware design & engineering
  - Solution architecting
  - Help & Support



# Metrc Focus

- Over **53,000** Industry users enrolled
- Over **200** State users
- Over **68,000** patients
- Over **5,200** licensees registered
- Over **11,501,800** plants commissioned
- Over **8,527,139** packages tracked
- Over **1,421,585** travel manifests processed
- Over **4,455,445,000.00** dollars transacted

Up-Time better than 99.9%





What is Metrc?

# Scope

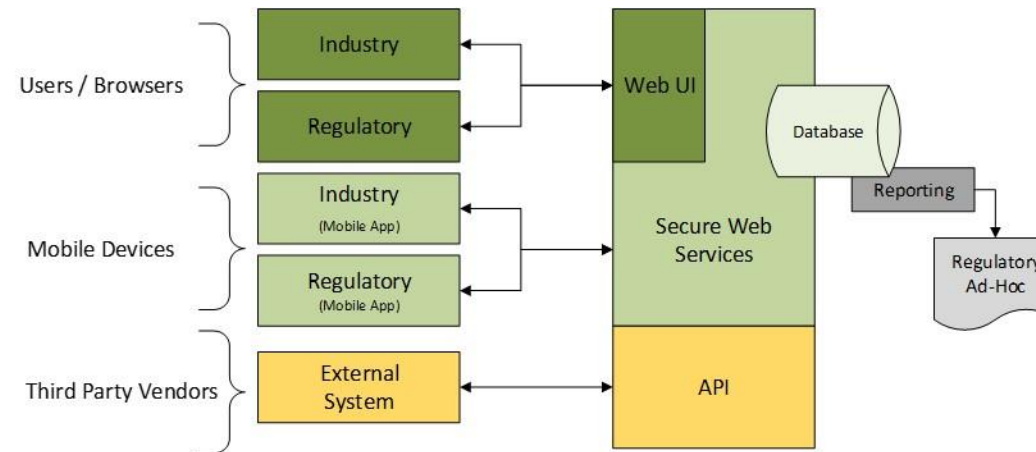
- Metrc™ is a compliance management solution used by regulatory bodies for the oversight of the marijuana industry.
- Metrc is a cloud hosted on-line software reporting system used by licensed marijuana businesses to manage and report supply chain activities as required by state rules.



# What Makes up Metrc

The system consists of:

- A web application
- Web services
- A mobile application for site inspection
- A mobile application for industry use



# How Metrc is Built

- Private dedicated hardware
- Secure on-line access
- Real-time with data backup and failover

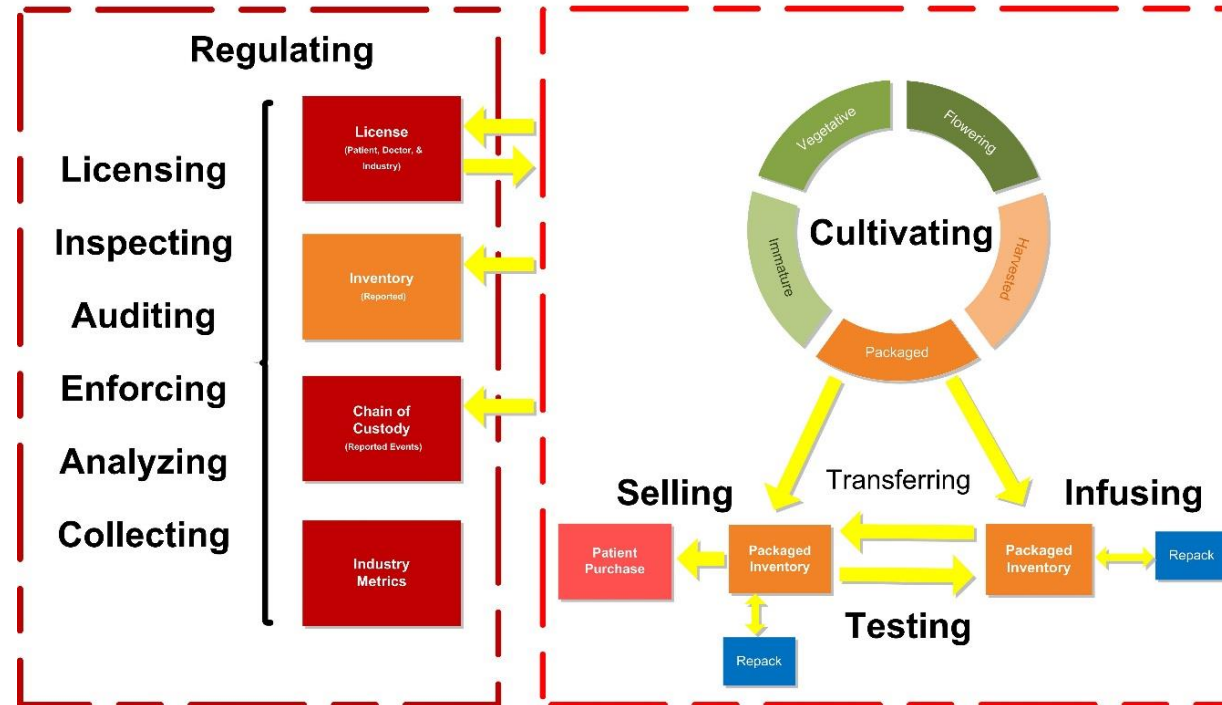






# How Does Metrc Work

# How Metrc is Organized



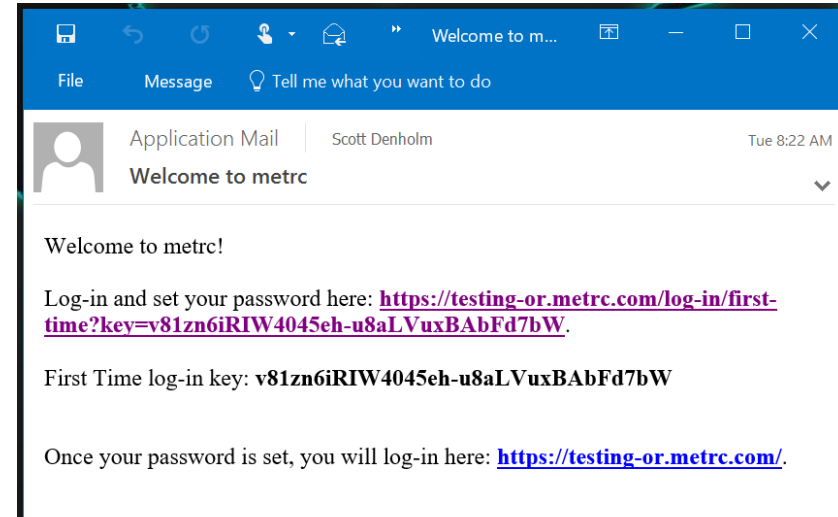
Government  
Agencies



Industry

# Setup Personal Profile

- First time credentialing
- "Welcome to metrc" email,
- Follow these steps to complete your login credentials:
- Click on the first link. You will be directed to the website.
- Setup a user Profile

A screenshot of a web form titled 'Personal & Security Info.'. The form contains several input fields: 'Full Name' (with 'Your Name' as a placeholder), 'Email' (with 'john@gmail.com'), 'Phone Number' (with '719-555-2222' and a red 'X' icon), 'Username' (with 'M0000X'), 'Password', and 'Confirm Password'. Below these is a 'Password Recovery' section with a 'Security Question' and 'Security Answer' field, and a 'View Security Answer' checkbox. At the bottom are 'Save Profile' and 'Undo Changes' buttons. Numbered blue circles (1-6) are placed over the form with lines pointing to labels at the bottom: 1 points to 'Enter email address', 2 to 'Password', 3 to 'Phone Number', 4 to 'Enter Personal Security Question Answer', 5 to 'View Security Answer', and 6 to 'Confirm password'.

# Setup Business Profile

1. Receive Metrc Administrator credentials
2. Add facilities
3. For each facility add:
  - A. Employees
  - B. Strains
  - C. Items
  - D. Locations

Permissions for each type of facility

	Producer	Processor	Retailer	Lab	Secure Transporter
Plants	√				
Packages	√	√	√	√	
Transfers	√	√	√	√	√
Reports	√	√	√	√	
Sales			√		

# Setup Product Profile

## Categories

- Buds (by strain)
- Concentrate
- Concentrate (each)
- Extract
- Extract (Each)
- Immature Plants
- Edibles (Each)
- Topical (Each)
- Shake/Trim (no strain)
- Shake/Trim (by strain)
- Seed (Each)

## Items

- Item names are used to identify what type of item is packed into a package.
- Category
- Type of product
- Quantity
- Unit of measure
- Used for traceability and recalls if necessary.

Need to fix these  
to match MI

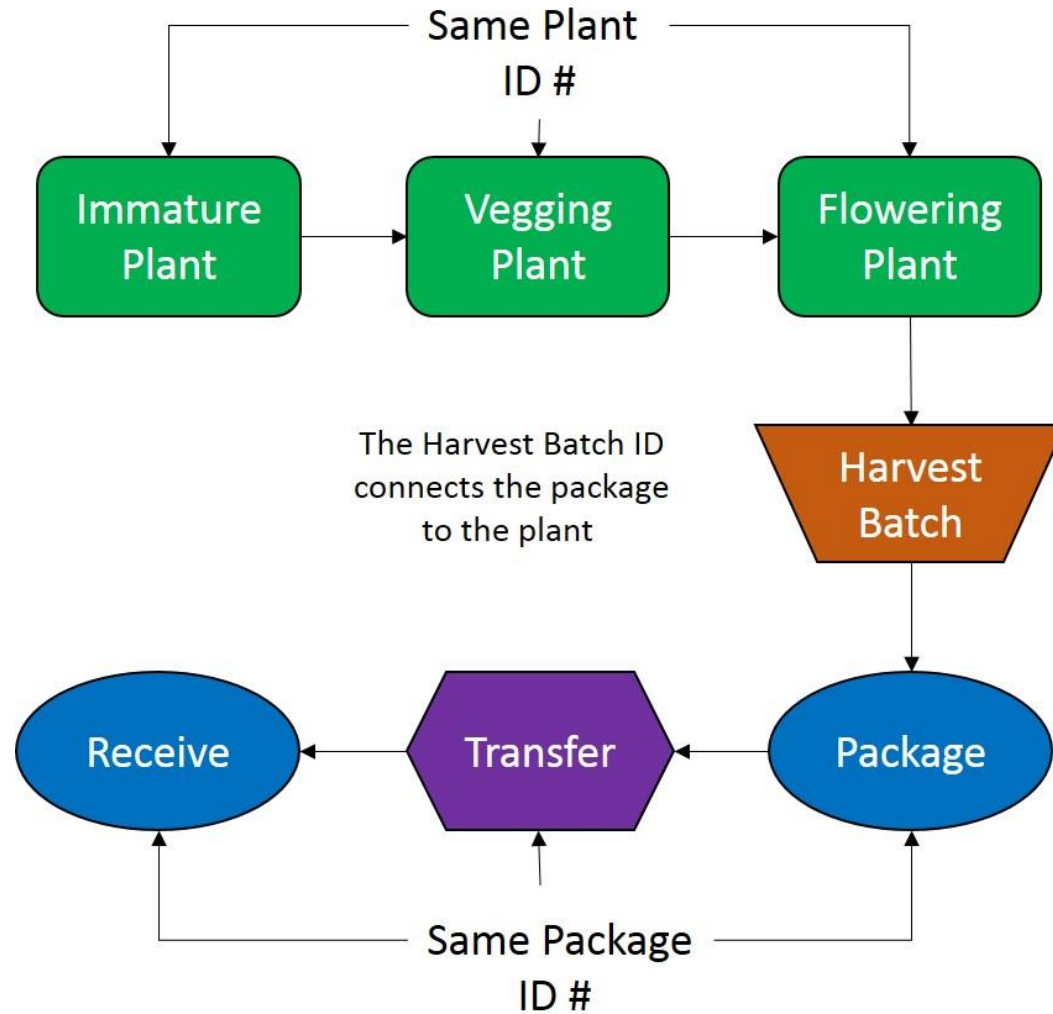


# Tags and Tracking

# Tagged Inventory in Metrc

- There are two types of tagged inventory in Metrc; **Plants and Packages**.
- **Plants** are immature, vegetative, or flowering. All plants must enter the system through immature plant batches. However, immature plants will be entered as un-tagged Planting Groups in Metrc.
- **Packages** are created from immature plants, harvest batches or other packages.







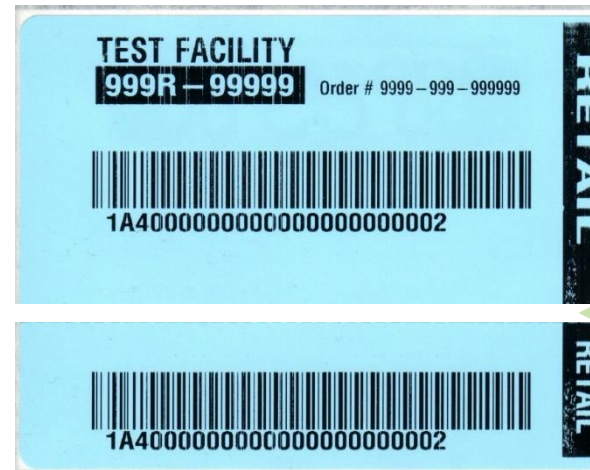


Plant



## Package

- ▶ Peel and stick – adhesive backing.
- ▶ Package tag is used for transferring packages and tracking of finished product for each licensee in the chain of custody.
- ▶ The package tag is perforated with the “Package ID #” printed on the upper and lower sections. (example: can be used for jar labeling in order to identify associated package).



# Tag Attached to Larger Plant





# Attachment to Small Plant



Point of strap used for inserting into small plant container



Strap inserted into growth media

# Plant Tag Strap User Instructions



Notch

## Multi-Use straps

When assembling the tag to a strap, move the tag up until the notch catches the label through the hole, so that the label will not slide down.



When hanging the tag, release one end of the label, then tie the strap around the plant.



# Metric Plants

# Plant Tracking

Each phase of plant life captured

Each plant location captured

Ability to destroy or place plants on hold

Each plant uniquely serialized

Complete event history

Plants

MMC CO Cultivation | 212-MMC

Immature Vegetative Flowering On Hold Inactive Harvested On Hold Inactive

Change Room Change Growth Phase Assign Tags Replace Tag Destroy Plants Changes by Room Manicure Plants Harvest Plants

Tag	Strain	Room	On Hold	Batch Date	Phase Date
<input checked="" type="checkbox"/> ABCDEF012345670000010711	AK-47	Plants Room	No	06/20/2014	07/20/2014

Description	Employee	Date	Reported
Planted	SCOTT DENHOLM (X00086)	06/20/2014	09/18/2014 01:10 am
Plant moved to room "Plants Room"	SCOTT DENHOLM (X00086)	06/30/2014	09/18/2014 01:10 am
Changed Growth Phase to Vegetative	SCOTT DENHOLM (X00086)	06/30/2014	09/18/2014 01:10 am
Attached tag ABCDEF012345670000010711	SCOTT DENHOLM (X00086)	06/30/2014	09/18/2014 01:10 am
Changed Growth Phase to Flowering	SCOTT DENHOLM (X00086)	07/20/2014	09/18/2014 01:10 am

Page 1 of 1 20 items per page Viewing 1 - 5 (5 total)

ABCDEF012345670000010712	AK-47	Plants Room	No	06/20/2014	07/20/2014
ABCDEF012345670000010713	AK-47	Plants Room	No	06/20/2014	07/20/2014

# Harvest Steps

- **Harvest** – Create harvest with associated plants
- **Weigh** – the plant in its entirety after being cut from root ball (stem, stalk, bud/flower, fan leaves, trim leaves, etc.)
- **Waste** – can be multiple entries but must be reported the day it is created
- **Package** – pack and tag product (buds, or shake/trim)
- **Transfer** – must create transfer manifest to move product to Testing Lab, Processors, Wholesalers etc.
- **Finish** – when HB is completely gone



# Harvest Tracking

Harvest  
details  
captured

metrc

Plants

Packages

Transfers

Retail Initiative

Financials

Reports

Admin

Help & Support

Plants

MMC CO-OP

Immature

Vegetative

Flowering

On Hold

Inactive

Harvested

On Hold

Inactive

Create Packages

Report Waste

Finish Batch

Harvest Batch	Type	Room	Wet Weight	On Hold	Batch Date
2014-07-30-Harvest Room-M	Manicure	Harvest Room	40 oz	No	07/30/2014
2014-07-30-Harvest Room-H	Harvest	Harvest Room	40 oz	No	07/30/2014
GA Red Kush 9-22	Harvest	Harvest Room	316.8 g	No	09/22/2014
GA Red Kush 9-30	Harvest	Harvest Room	396.8 g	No	09/30/2014
GA Red Kush 10-1	Manicure	Harvest Room	40 oz	No	10/01/2014
GA Red Kush 10-2					10/02/2014
Spring Hill Kush 10-10					10/10/2014

Harvest created in room "Harvest Room"

Manicured 1 Ounces from Plant ABCDEF012345670000010021

Manicured 1 Ounces from Plant ABCDEF012345670000010022

Manicured 1 Ounces from Plant ABCDEF012345670000010023

Manicured 1 Ounces from Plant ABCDEF012345670000010024

Manicured 1 Ounces from Plant ABCDEF012345670000010025

Employee

SCOTT DENHOLM (X00095)

SCOTT DENHOLM (X00095)

SCOTT DENHOLM (X00095)

SCOTT DENHOLM (X00095)

SCOTT DENHOLM (X00095)

SCOTT DENHOLM (X00095)

Date

07/30/2014

07/30/2014

07/30/2014

07/30/2014

07/30/2014

07/30/2014

Rep

09/18/2014 01:10 am

09/18/2014 01:10 am

09/18/2014 01:10 am

09/18/2014 01:10 am

09/18/2014 01:10 am

09/18/2014 01:10 am

Page 1

Viewing 1 - 7 (7 total)

Each harvest captured

All associated  
plant data  
captured





Packages

# Packages - Definition

- Any amount of marijuana or infused product that may be sold, processed or transferred and must be placed into one or more containers, each having a unique tag created in Metrc.
- Any product intended for transfer must have a package tag.
- Metrc allows you to repack any package into a new package.



# Package Tracking

Each package  
uniquely serialized

Complete package  
status & history

The screenshot shows the 'metrc' web application interface for 'Packages'. The top navigation bar includes 'Plants', 'Packages', 'Transfers', 'Financials', 'Reports', and 'Admin'. The user is logged in as 'MMC CO Cultivation | 212-MMC'. The 'Packages' section has tabs for 'Active', 'On Hold', and 'Inactive'. Below these are buttons for 'New Packages', 'Submit for Testing', 'New Transfer', 'Adjust Packages', and 'Finish Packages'. The main table lists packages with columns: Tag, Harvest, Item, Category, Quantity, Prod. Batch, Lab Testing, On Hold, Date, and a 'Discontinue' button. The first package (Tag: ABCDEF012345670000010741) is expanded to show a detailed view with fields for Description, Employee, Date, and Reported. The description is 'Packaged 1 Ounces of Buds from Harvest "2014-07-30-Harvest Room-M"'. The employee is 'SCOTT DENHOLM (X00086)', the date is '08/09/2014', and the reported time is '09/18/2014 01:10 am'. The bottom of the interface shows pagination: 'Page 1 of 1', '20 items per page', and 'Viewing 1 - 1 (1 total)'.

Tag	Harvest	Item	Category	Quantity	Prod. Batch	Lab Testing	On Hold	Date	
ABCDEF012345670000010741	2014-07-30-Harvest Room-M	Buds	Buds	1 oz	No	NotSubmitted	No	08/09/2014	Discontinue
<div><div>Description</div><div>Packaged 1 Ounces of Buds from Harvest "2014-07-30-Harvest Room-M"</div><div>Employee</div><div>SCOTT DENHOLM (X00086)</div><div>Date</div><div>08/09/2014</div><div>Reported</div><div>09/18/2014 01:10 am</div></div>									
ABCDEF012345670000010742	2014-07-30-Harvest Room-H	Buds	Buds	1 oz	No	NotSubmitted	No	08/09/2014	Discontinue
ABCDEF012345670000010743	2014-07-30-Harvest Room-M	Buds	Buds	1 oz	No	NotSubmitted	No	08/09/2014	Discontinue

All associated  
plant data  
captured



Transfers

# Transfers

- A transfer must be created anytime a package moves from one physical location or licensed facility to another.
- A transfer can be rejected by package or completely.
- A rejected package will require the originating Licensee receive the package back into their custody.

**New Transfer**

Scooter (X00086) Ford Mustang 123 gofast

Occupational: X00086 Vehicle Make: Ford

Driver's Name: Scooter Vehicle Model: Mustang

Driver's Lic. No.: DL98765AB License Plate: 123 gofast

Phone No. for Questions: (use default)

Destination 1: 402-X0001 Type: Transfer

Planned Route: Est. Departure: 09:36 AM today

Est. Arrival: 09:36 AM today

**MARIJUANA ENFORCEMENT DIVISION**  
**MARIJUANA TRANSPORTATION MANIFEST**

All sales transactions are to be completed prior to transportation of any Medical Marijuana. The originating entity may reject product delivered, but amount delivered must be limited to amount agreed upon in prior sales transaction. If the person transporting Medical Marijuana has not yet received his or her occupational license number, put "Pending" in the appropriate field.

Manifest #:	0000000040	Date Completed:	01/26/2016
License # of Originating Entity:	300-X0002	For MED Use Only	
Name of Originating Entity:	OR LOFTY ESTABLISHMENT, LLC		
Address of Originating Entity:	9079 SE McLoughlin Blvd. Portland, OR 97222-7355		
Phone # of Originating Entity:			
Phone # MED Can Call with Questions: 123.456.7890			
DESTINATION:	OR LOFTY ESTABLISHMENT, LLC	Destination Phone #:	
Stop Number on Route:	1	Destination License Number:	200-X0002
Address of Destination:	9079 SE McLoughlin Blvd. Portland, OR 97222-7355	Date and Approximate Time of Departure:	1/27/16 3:09 PM
Route to Be Traveled:	I will use this route.	Date and Approximate Time of Arrival:	1/28/16 3:09 AM
<small>Notes: details for estimating insurances (e.g., road closures, flat tire, etc.)</small>			
Item Description	Item Label	Weight/Quantity	
Shake/Trip	ABCDEF012345670000012879	15.0000	
Shake/Trip	ABCDEF012345670000012880	14.0000	
Shake/Trip	ABCDEF012345670000012881	10.0000	
Shake/Trip	ABCDEF012345670000012882	15.0000	
<b>PRODUCT REJECTION (if only a portion of shipment is rejected, circle that portion above)</b>			
Name of Person Rejecting or Rejecting Product:			
I confirm that the contents of this shipment match weight records entered above, and I agree to take custody of those portions of this shipment not circled above. Those portions circled were returned to the individual delivering this shipment.			
Signature:	Date:		
Signature of individual taking receipt of rejected portion of this shipment:			
Name of Person Transporting:	X	Occupational License # of Person Transporting:	Pending
Signature of Person Transporting:			
Make, Model, License Plate #:	X X X		

# Transfer Tracking

Transfer manifest created, moved and monitored by the system

Detailed transfer manifest and history captured

Transfers

MMC CO Lakeland Store | 402-MMC

New TransferView Manifest

IncomingOutgoingRejected

Manifest	License	Origin	Driver	Vehicle Info	Packages	Est. Departure	Est. Arrival	Received	
0000001603	403-MMC1	MMC CO LLC	Scooter Brown	Make: X Model: X Lic. Plate: X	1	10/13/2014 01:07 pm	10/13/2014 01:07 pm	10/13/2014 12:08 pm	
0000001601	403-MMC1	MMC CO LLC	Scooter Brown	Make: X Model: X Lic. Plate: X	5	10/13/2014 12:51 pm	10/13/2014 12:51 pm	10/13/2014 11:56 am	

Package

Item

Shipped Qty.

Received Qty.

Status

ABCDEF012345670000020253	Immature Plants - GA Red Kush	2 ea	2 ea	Accepted
ABCDEF012345670000020254	Buds - GA Red Kush	453.6 g	453.6 g	Accepted
ABCDEF012345670000020256	Shake/Trim	453.6 g	453.6 g	Accepted
ABCDEF012345670000020257	Shake/Trim	450 g	450 g	Accepted
ABCDEF012345670000020258	Buds - GA Red Kush	451 g	451 g	Accepted

1

Page 1 of 1

20

Items per page

Viewing 1 - 5 (5 total)

0000001501	403-MMC1	MMC CO LLC	Scooter Brown	Make: X Model: X Lic. Plate: X	1	10/10/2014 12:47 pm	10/10/2014 12:47 pm	10/10/2014 11:50 am	
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# Lab Test Results

Lab test results by batch, controlled by a testing facility

Test Result Tracking

The screenshot shows a web application window titled "Test Packages". Inside, there's a section for "Test Package # 1" with a "(clear)" button. Below this, there are input fields for "Package" (with a search icon), "Test Date" (with a calendar icon and "today" button), and "Package Status" (with radio buttons for "Passed" and "Failed"). To the right, there's a "Result # 1" dropdown menu currently showing "- Select -". Below the dropdown, there's a list of test results: "Quantity", "Status", and "Notes". The "Status" dropdown is open, showing options: "CBD", "CBN", "Microbial", "Solvent", "THC", and "THCa". At the bottom of the form, there are "Record Tests" and "Cancel" buttons. A blue button with a plus sign and "(results)" is also visible.

Customizable test results with notes

# Reports

**Reports Control Panel** MMC C

select one, or multiple, tags to filter reports  
☒ Facility ☐ Inventory ☐ Packages ☐ Trends

**Monthly Sales**

Start Date  PDF Excel Word

End Date

Facility Inventory Packages Trends

**Packages Inventory**

Item Filter (optional) PDF Excel Word

- All Item Categories -

- All Lab Testing States -

Start Date

End Date

Facility Inventory Packages Trends

**Packages Sales**

Item Filter (optional) PDF Excel Word

- All Item Categories -

Start Date

End Date

Facility Packages Trends

**Reports Control Panel**

select one, or multiple, tags to filter reports  
☒ Facility ☐ Harvests ☐ Inventory ☐ Packages ☐ Plants ☐ Trends

**Harvests**

Harvest Name Filter (optional) PDF Excel Word

Room Filter (optional)

Start Date

End Date

Facility Harvests

**Monthly Plants Inventory**

Start Date  PDF Excel Word

End Date

Facility Plants

**Packages Inventory**

Item Filter (optional) PDF Excel Word

- All Item Categories -

- All Lab Testing States -

Start Date

End Date

Facility Inventory Packages Trends

**Plants Inventory**

Strain Filter (optional) PDF Excel Word

Room Filter (optional)

- All Growth Phases -

Start Date

End Date

Facility Inventory Plants Trends

**Plants Trend**

Start Date  PDF Excel Word

End Date

Facility Plants Trends

Sales

Cultivation

Transfer

Package

Reports  
configured with  
trend Analysis

Exportable to  
MS Word, MS  
Excel and PDF  
formats





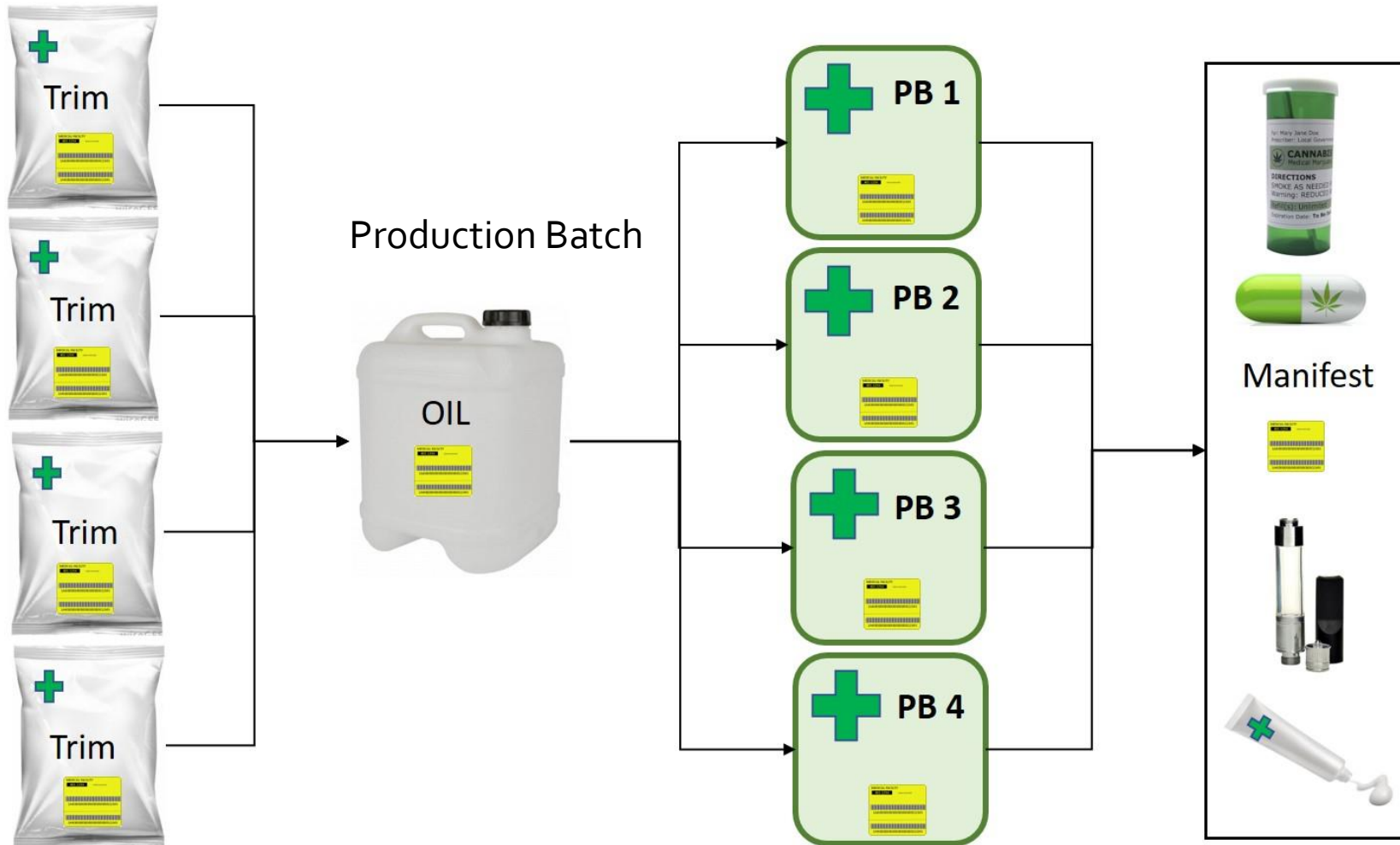
# Processors

# Packages & Intermediate Processes

- For in-coming packages used in an intermediate process such as making **concentrate**.
  - Pull from existing packages and create a new package for the **concentrate**.
  - The new packaged **concentrate** may then be partially used in an infused product such as an Infused Edible or Infused Non-Edible or another Concentrate.



# Edible/Non-Edible Process



# Sales

- Recording of Sales in Metrc is for “reporting last event in chain of custody”
  - Total quantity
  - Unit of Measure
  - Total dollars of the sale
- There is sales data import functionality currently with POS companies
  - POS companies will provide more details.
  - CSV File upload



# Sales Reporting

## Sales Receipts

Record Receipts

Edit Receipts

Import

Daily Sales (read-only)

Receipt

Sales

Customer Type

Patient

Record Receipts

Sales Receipt # 1

(clear)

Sale Date/Time

10/30/2017

today

02

:

46

PM

Customer

☐ Consumer

☐ Patient

Package # 1

ABCDEF012345670000025183

(clear)

Available6.9251 oz

Quantity

ex. 100.23

- Select -

Total Price

\$

ex. 100.23

(package)

Record Sales Receipts

Cancel

Do they need to have patient ID #



# RFID, What & Why



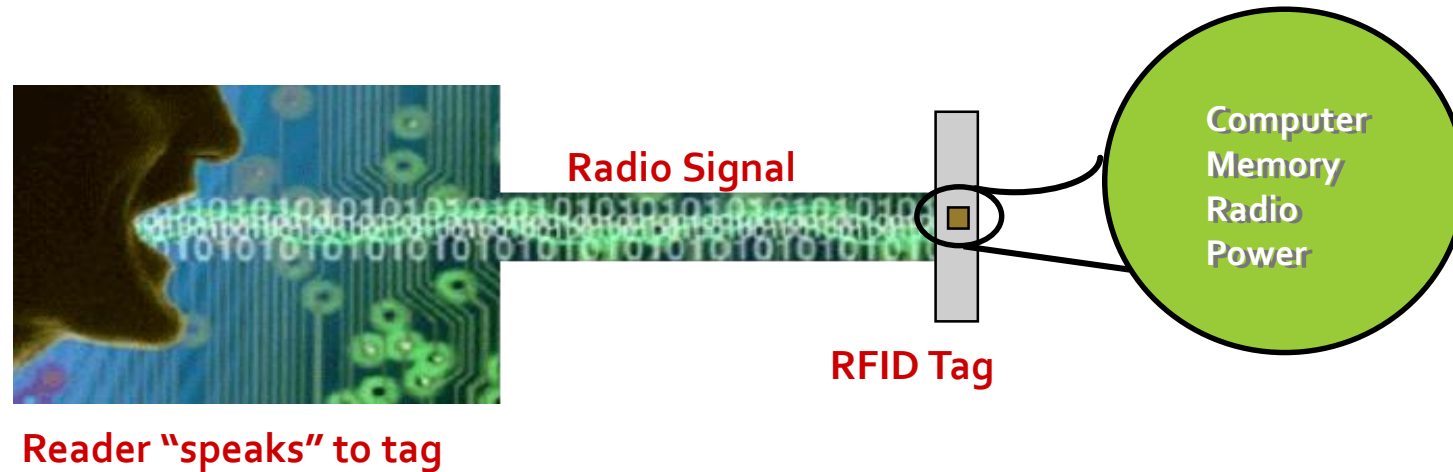
# Speed / Accuracy / Precision





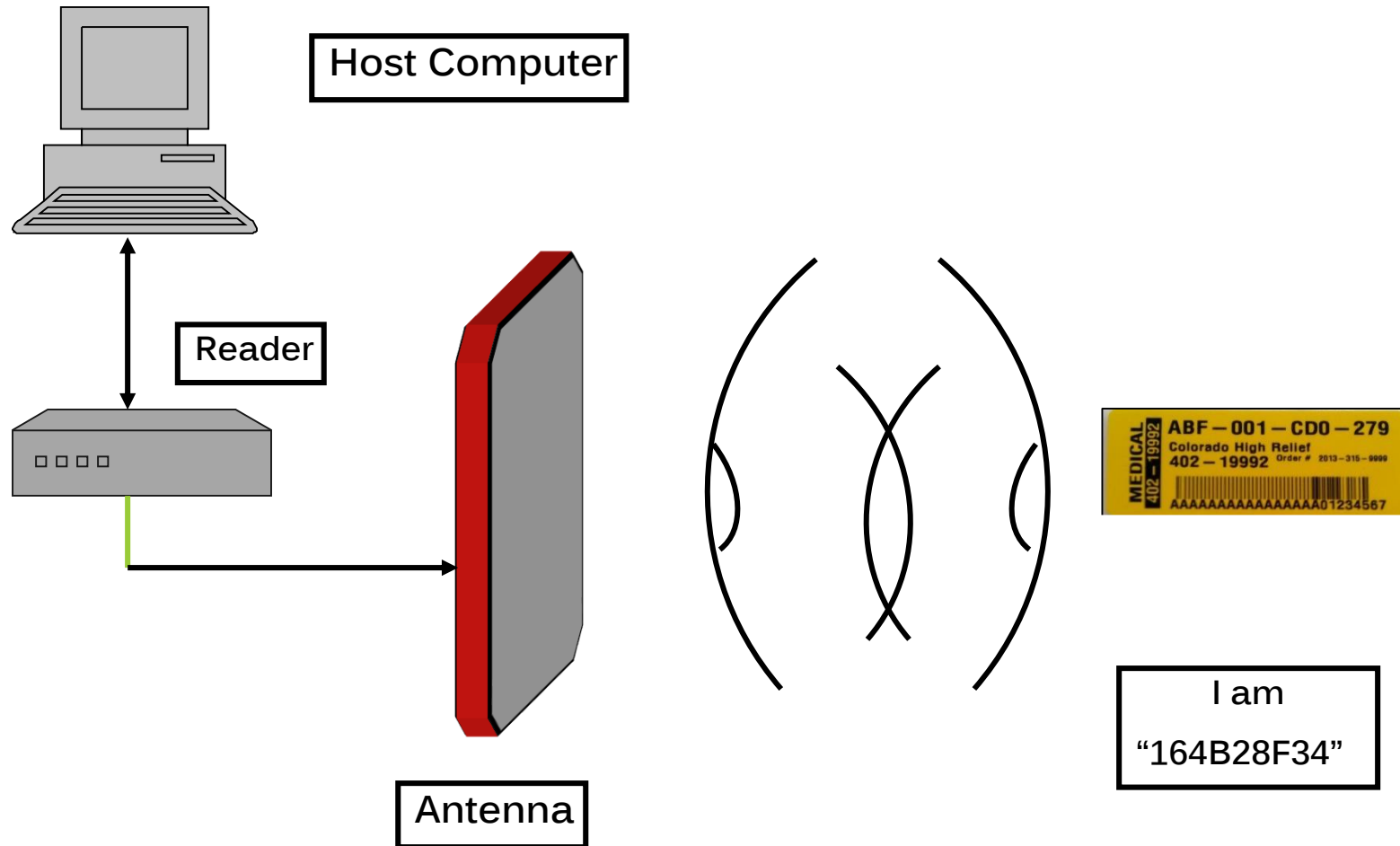
# What is RFID?

- Radio Frequency Identification
  - A technology that identifies objects using low-power radio frequency technology.
- RFID Solutions consist of three components:
  - Hardware (Reader and Antenna)
  - RFID Tag
  - Software



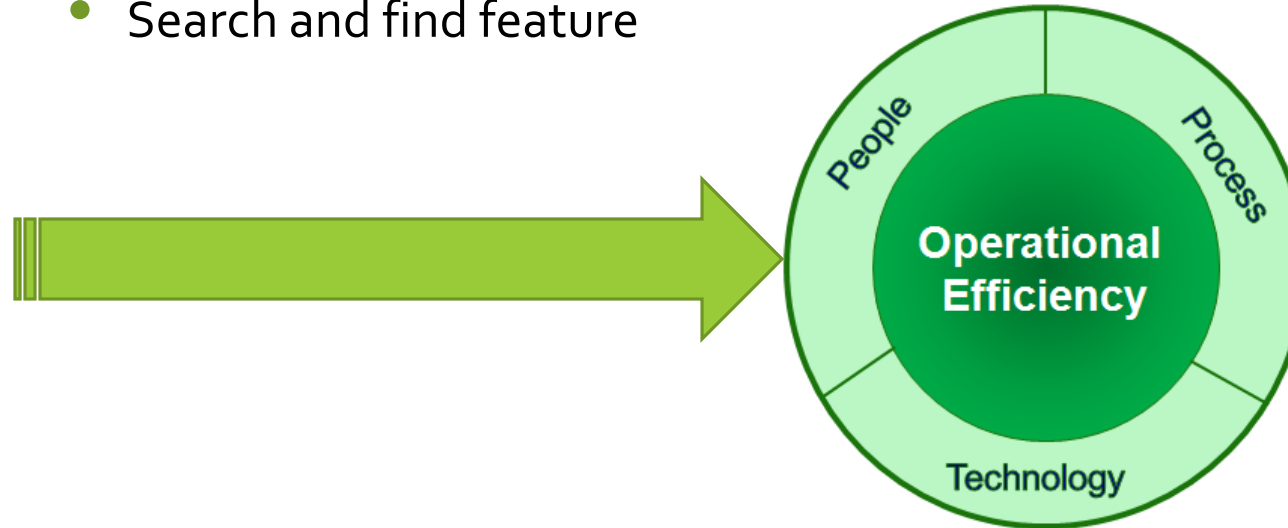


# How Passive RFID Works



# Why RFID

- Read Range – 10+ Feet
- No line of sight
- Speed 8 to 10 times faster than bar-code
  - Improved Accuracy
  - Faster compliance
  - Search and find feature





Integration

# Application Programming Interface

- The API supports data transfer FROM vendor applications to METRC
- The API supports data transfer TO vendor applications from METRC
- The API supports data transfer FROM agency applications to METRC
- The API supports data transfer TO agency applications from METRC

*Third party vendors  
certification process currently  
in process*





Support

# Support Resources

## Support Tab

- Metrc Manual/User Guide
- Quick Reference guide
- Training
- **Interactive Support**
- E-mail
  - [Support@metrc.com](mailto:Support@metrc.com)
  - Metrc support line - 877-566-6506





### Contact Information

**Support Desk**

877-556-6506

Support@metrc.com

**[www.metrc.com/michigan](http://www.metrc.com/michigan)**